

ABSTRACT OF THE DISCLOSURE

A method of managing a fluid or gas reservoir is disclosed which assimilates diverse data having different acquisition time scales and spatial scales of coverage for iteratively producing a reservoir development plan that is used for optimizing an overall performance of a reservoir. The method includes: (a) generating an initial reservoir characterization, (b) from the initial reservoir characterization, generating an initial reservoir development plan, (c) when the reservoir development plan is generated, incrementally advancing and generating a capital spending program, (d) when the capital spending program is generated, monitoring a performance of the reservoir by acquiring high rate monitor data from a first set of data measurements taken in the reservoir and using the high rate monitor data to perform well-regional and field-reservoir evaluations, (e) further monitoring the performance of the reservoir by acquiring low rate monitor data from a second set of data measurements taken in the reservoir, (f) assimilating together the high rate monitor data and the low rate monitor data, (g) from the high rate monitor data and the low rate monitor data, determining when it is necessary to update the initial reservoir development plan to produce a newly updated reservoir development plan, (h) when necessary, updating the initial reservoir development plan to produce the newly updated reservoir development plan, and (i) when the newly updated reservoir development plan is produced, repeating steps (c) through (h). A detailed disclosure is provided herein relating to the step (a) for generating the initial reservoir characterization and the step (b) for generating the initial reservoir development plan.